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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,228	07/29/2003	Hideki Takenaka	O3020.0350/P350	4760
24998	7590	12/27/2007		
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER LIEW, ALEX KOK SOON	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/628,228	<b>Applicant(s)</b> TAKENAKA, HIDEKI	
	<b>Examiner</b> Alex Liew	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-15 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The amendment filed on 10/11/07 is entered and made of record.

### **Response to Applicant's Argument**

On page 10, the applicant stated: [Applicants' claimed invention does not perform two comparisons between a captured image and a database image to improve match accuracy, as Prokoski teaches. Rather, Applicants' claimed invention performs a first comparison between a "face image detected by the detection means" and a "face image stored previously or subsequently in the storage means," and a second comparison between a "new face image" and a "face image in the restored original image." In others words, Prokoski compares the same face images twice, while Applicants' claimed invention compares different face images. ] The examiner agrees, where Prokoski does not teach comparing a '*new face image*' and to a '*face image in the restored original image*' or an image to database. In an updated search, the examiner cannot find another reference which reads on the amended claim 1, which maybe combined with Turk and Yamamoto.

However, the amendments in the other independent claims do not include comparing a '*new face image*' and to a '*face image in the restored original image*'

### **Allowable Claims**

Claims 1 – 3 are allowable.

With regards to claim 1, the examiner cannot find any applicable prior art and/or suggestions disclosing when a new face image is stored in the storage means

subsequently, the abstraction means restores to the original image abstracted by the abstraction process means in the storage means, the detection means detects face images from the restored original image, and the determination means determines whether a face image in the restored original image detected by the detection means matches with the new face image stored subsequently in the storage means by comparing both face images in combination with the rest of the limitations of claim 1.

### ***Claim Objections***

Claim 4 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, claim 4 is not treated on the merits.

### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turk (US pat no 5,164,992) in view of Yamamoto (US pub no 2004/0145657) and Prokoski (US pat no 6,496,594).

With regards to claim 5, Turk discloses a face identification method comprising the steps of:

detecting face images from original images taken by a camera (see column 3, lines 18 to 21 and 37 to 41, the audience sitting shows the entire body of the audience then head of a person is located);

determining whether a detected face image matches with a previously stored face image of a specific person by comparing both face images (see column 3, lines 43 to 45, after the head of the person is located module 10 of figure 1 determines whether the face is one of a reference set of faces);

not applying abstraction process to a detected face image when said determination means determines that both face images match with each other (there is no process perform on the face image after being identified); and

storing a face image subsequently after it has been identify as an image not belonging in a database (see column 8, lines 1 to 8).

Turk does not teach abstraction process. Turk does teach identifying individuals who are in front of a television (column 3, lines 17 to 25), these individuals' faces are either identified as being a member of the family (see col. 8 lines 3 – 5), which is read as the 'criminals', or not identify, the person being a guest (see col. 7 line 67 to col. 8 lines 1 – 2), which is read as the 'non-specific person.' Yamamoto suggests on paragraph 4, those who are being monitor feels unpleasant, so covering their faces with 'abstraction' procedure will protect their privacy.

The combination of Turk and Yamamoto disclose abstraction means for applying an abstraction process to a predetermined face image out of the face images detected by said detection means in order to make the predetermined face image unrecognizable (the faces of the guest / 'non-specific', shown in Turk citation above, are covered with an 'abstraction' process, disclosed by Yamamoto, figure 5 using DCT) and not applying the abstraction process to a detected face image when the determination means determines that the detected face image is a specific person (in Turk nothing is done after the face had been identified except storing the face in storage medium, column 8 lines 3 to 5).

Yamamoto also discloses when a face image is stored in the storage means subsequently, the abstraction means restores to the original human body images taken by the camera (see figure 5, 502 abstraction is perform on the captured image then recovered in 505). One skilled in the art would include abstraction means because protect the privacy of the individuals who feels unpleasant when constantly being observe while criminals or suspicious individuals are being searched through surveillance camera (see paragraph 4).

Turk does not disclose performing determination means for the second time.

Prokoski discloses performing determination means for the second time (see column 17 lines 9 to 24, when there is a potential match, further processing occurs to verify a match, processing such as comparing database images with captured image in a new rotated view or with another alignment). One skilled in the art would include another determination means because to increase improve accuracy of the face recognition in

case the face in the captured image shows a different expression compared to the image in the database, which may produce some recognition error.

With regards to claims 6, 7 and 12 – 15, see the rationale and rejection for claim 5.

With regards to claim 8, Yamamoto discloses the computer makes the face unrecognizable by applying a mosaic process (see figure 5, 502).

With regards to claim 9, Turk discloses storing the version of the input image (see column 8, lines 1 to 6).

With regards to claims 10 and 11, Turk discloses a digital camera (see figure 1, element 4).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Liew whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/22/07

  
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